Abstract

DC Compensation for a Direct Conversion Radio Receiver

A direct conversion receiver uses an algorithm implemented by a DSP to cancel
residual dc offsets during demodulation of a GMSK modulated signal. The
algorithm exploits the characteristics of GMSK modulation by determining the
modulation extremes within sampled I/Q signals and calculates the DC offset as the
mean of the extremes. This offset is used to weight a declining exponential
function which is subtracted from the original signal samples to achieve
compensation.